

Appl. No. 10/535125  
Amdt. dated October 27, 2008  
Reply to Office Action of June 26, 2008  
Attorney Docket 18062

### **REMARKS**

Claims 1-18 were pending for examination. Claims 1, 4, 10, 12 and 17 have been amended, 16 has canceled and claim 19 has been added. Favorable reconsideration and allowance of this application is respectfully requested in light of the amendment and the foregoing remarks. No new matter has been added.

### **Information Disclosure Statement**

A supplemental IDS is being filed in a separate transmission including the reference discussed in the background.

### **Drawings**

Claim 2 has been amended such that the controlled variable speed electric motor is not directly recited. Removal of this rejection is respectfully requested.

### **Claim Objections**

Claim 16 was previously rejected for failing to further limit the subject matter of a previous claim. Claim 16 has been canceled making this rejection moot.

### **Rejection of Claims under 35 U.S.C. §103**

Claims 1 and 4 were rejected under 35 U.S.C. §102(b) as being anticipated by U.S. Patent No. 3,939,933 to Armstrong.

Claim 1 recites a hydraulic steering device for vehicles with an articulated joint between the major ground-engaging components of the vehicles. A hydraulic swiveling vane motor having at least two movable vanes is incorporated into the

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### **REMARKS**

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articulation joint or arranged on the turning axle of the articulation joint. . A hydraulic pump with a variable flow rate and reversal of the direction of delivery is in fluid flow communication with the swiveling motor. The steering system allows for the configuration of the motor to provide a more uniform coupling of power to the rotating axle, as well as requiring only about half of the size of the single-vane motor for the same steering torque.

Armstrong shows a transmission control system having a hydraulic pump in communication with a hydraulically operated device, a ram, incorporated above a articulation joint. While Armstrong discloses the hydraulically operated device could be a ram, vane motor or a hydraulic steering device. It does not disclose the positioning or configuration of the vane motor. Armstrong does not give any further detail regarding the positioning of a vane motor or a particular configuration only that it was speculated one could be used in place of a ram.

Armstrong does not show all of the elements of claim 1, therefore removal of this rejection is requested. Claim 4 depends from claim 1 and should be allowable for at least the same reasons.

Claim 4 is separately patentable as it discusses the use of additional motors arranged above or below the joint. This configuration increase the possible steering torque or reduce the size of the individual swiveling motors. As the maximum steering torque results from the total volumes of all the motors working together, thus an optimum ratio of size to the possible steering torque is achieved. Armstrong does not show any vane motor configuration using multiple motors.

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Claims 2 and 5 were rejected under 35 U.S.C. §103(a) as being unpatentable over Armstrong as applied to claim 1, and further in view of US patent 6, 719,377 to Zimmerman.

Claims 2 and 5 are dependent on claim 1 and should be allowable for at least the same reasons as claim 1.

Claims 3, 6-8, 10, 11 and 16 were rejected under 35 U.S.C. §103(a) as being unpatentable over Armstrong in view of US Patent Publication 2003/0013575 to Sprinkle.

Claims 3, 6-8, 10, 11 and 16 are dependent on claim 1 and should be allowable for at least the same reasons.

Claim 9 and 10 were rejected under 35 U.S.C. §103(a) as being unpatentable over Armstrong in view of Zimmerman and in further view of Sprinkle.

Claims 9 and 10 are dependent on claim 1 and should be allowable for at least the same reasons as claim 1.

Claims 12 and 14 were rejected under 35 U.S.C. §103(a) as being unpatentable over Armstrong in view of Sprinkle in view of US Patent to Sakamoto 5,584,346.

Claims 12 and 14 are dependent on claim 1 and should be allowable for at least the same reasons as claim 1.

Claims 12 is further patentable as the references do not disclose using a joystick to control the movement of a swiveling vane motor for steering a vehicle. They instead discuss using the joystick connected to said electronic control element

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for contracting and expanding a steering cylinder but do disclose the use of a joystick in controlling a swiveling motor as related to the direction of a vehicle.

Claim 13 is further patentable as none of the references disclose the use of a joystick with a force feedback function. The Sakamoto reference as discussed by the examiner only appears to show using a joystick, with a return to neutral function, for setting the target blade tilt angle. It does not show any use of force feedback that transmits forces felt in actual operations relating to the steering of the vehicle

Claims 17 and 18 were rejected under 35 U.S.C. §103(a) as being unpatentable over Armstrong in view of Sprinkle and further in view of US Patent Publication 2002/0170769 to Sakaki.

Claims 17 and 18 are dependent on claim 1 and should be allowable for at least the same reasons as claim 1.

#### **New Claim 19**

New Claim 19 is separately patentable as none of the above prior art references disclose or suggest a swiveling motor positioned in the articulation joint such that a connecting section of a first portion of a vehicle runs through the swiveling motor and bearing points of the swiveling motor form the turning bearing between the first and a second portion of the vehicle. This configuration as discussed in paragraph 46 leads to a very compact construction of the joint. The Armstrong reference which recites the use of a vane motor does not disclose any such mounting configuration. None of the other cited references discuss the use of a vane motor.

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**Conclusion**

Applicants respectfully submit that claims 1-15 and 17-19 define patentable subject matter. A Notice of Allowance is therefore respectfully requested.

Examiner is authorized to direct payment of the fee for an extension of time, or credit any overpayment to Deposit Account No. 14-0780. The Examiner is invited to contact the undersigned by telephone if it would help expedite matters.

Respectfully submitted,



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